Wildlife Survey & Photo Service
2443 Fair Oaks Blvd. # 209 • Sacramento, CA 95825 • (916) 747-8537

Report 4262 (interim)
Pickerel Weir

October 1, 2012

To: Richard Marovich, Putah Creek Streamkeeper

The purpose of this report is to:

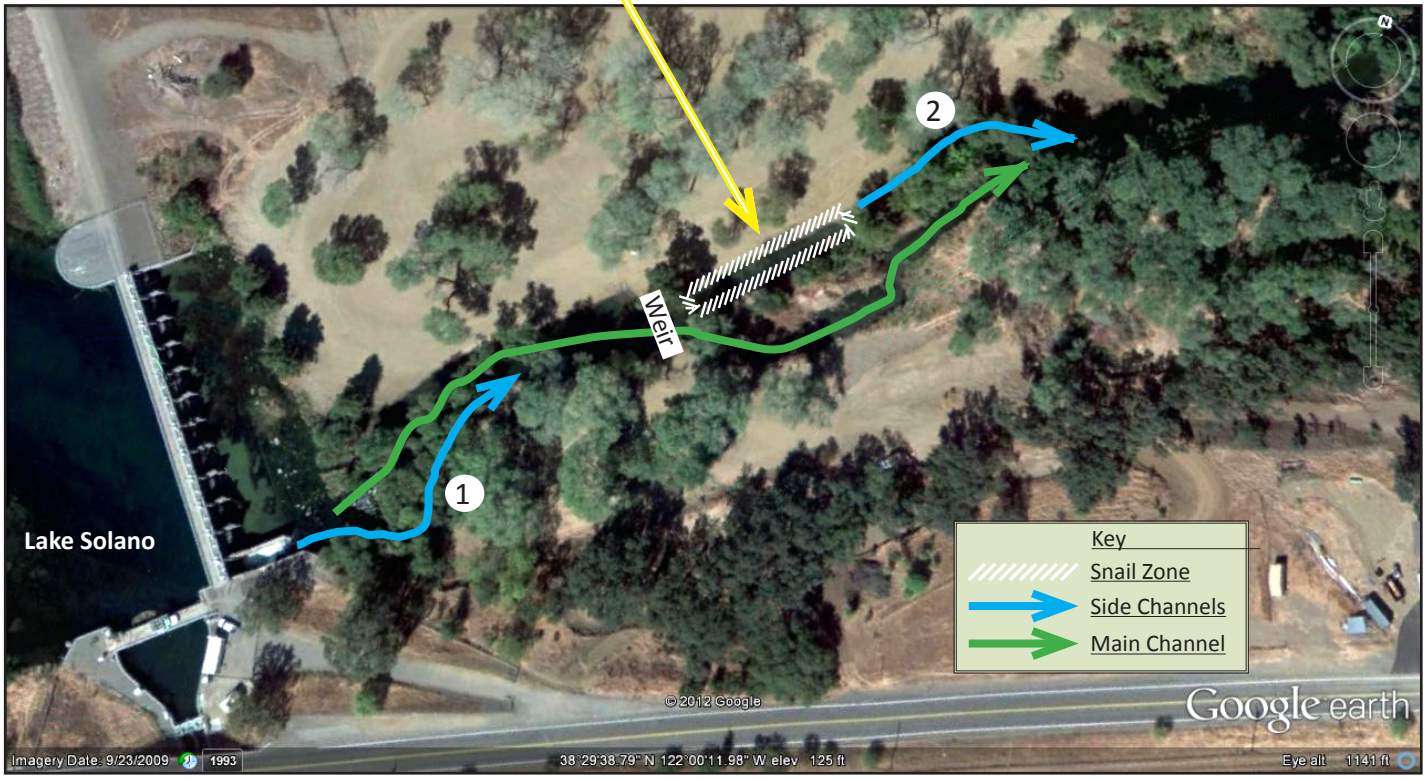
1. Inform you of ongoing documentation of several positive environmental changes at the Pickerel Weir
2. Suggest that narrowing the north side channel (Channel 2) will add 120 feet of spawning area.

Report:

Rick Fowler recently observed an increase in the density of small trout in the vicinity of the Pickerel Weir. His comments piqued my interest as recent invertebrate collections have documented a general increase in the density and diversity of the aquatic invertebrate populations and a decrease in New Zealand Mudsnail density in restored areas.

Aquatic invertebrates:

The aquatic invertebrate community in the main Pickerel channel - below the weir - is similar to the community at Fishing Access # 5. The invertebrate community in the North Side Channel (#2) is slightly more diverse and significantly more



Google Image Date: 9/23/09

dense (individuals / sq.m) than the main Pickerel Channel. The area which is immediately downstream for the weir and upstream from Channel #2 needs to be restored. It is called the SNAIL ZONE A sample taken on 9/28/12 from 10 different sites in the Snail Zone showed a total of 435 organisms. Note that 418 individuals (96%) were snails from five different genera - including New Zealand Mudsnails. Rick Fowler and I measured the area which is approximately 120 feet long. I suggest - if funding and permitting allows - that you talk with Mr. Fowler about ideas for narrowing the channel which would add 120 feet of spawning area. The Snail Zone has sufficient cobble which is primarily buried by sand.

New Zealand Mudsnails:

The New Zealand Mudsnail population is typically less dense this time of year although is some areas of Putah Creek mudsnails remain the dominant invertebrate. The NZMS densities are much less (8% of community) in the faster-flowing channels compared to 20% -50% of the invertebrate community in the snail zone.

Rainbow Trout:

Of special interest are two side channels Number 1 (Upstream South) and Number 2 (Downstream North) due to small trout currently using both side channels. The trout appear to be naturally-produced "wild trout." Using underwater video I have observed numerous trout protecting feeding areas in both side channels and the main channel. The trout are 5-7 inches (TL) and very dark which makes then difficult to see from above. That's great as an osprey has also noticed the small trout and has been active at Pickerel's.

Pickerel weir - facing downwstream - Image date 9/29/12

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North side channel facing upstream.

South side channel facing upstream. PDD in background.

Rainbow trout recently caught at Pickerel Weir - 5 inches TL

Recommendations

1. If permits allow - narrow the Snail Channel. Rick Fowler can offer more information on this subject.

2. When funding permits, consider planting more alder and sedges along the side channels.

3. When funding permits, inject additional gravel at the Pickerel Weir.

Ongoing Surveys / Documentation

1. We will continue routine monitoring at the site for future comparison.

2. We will be comparing the Pickerel site (routine monitoring) with Fishing Access # 3, the Design Channel, and the River Parkway Project.

3. We will also be collecting “drift samples” which tells us what aquatic insects are actually in the water column and directly available to fish.

4. Occasionally will be collecting ‘yellow sticky” trap samples of flying insects at the site.

5. We will continue to attempt to get professional quality subsurface video of the trout at Pickerel.

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Rainbow trout recently caught at Pickerel Weir - Note dark dorsal area

Submitted 10/2/12 via email:

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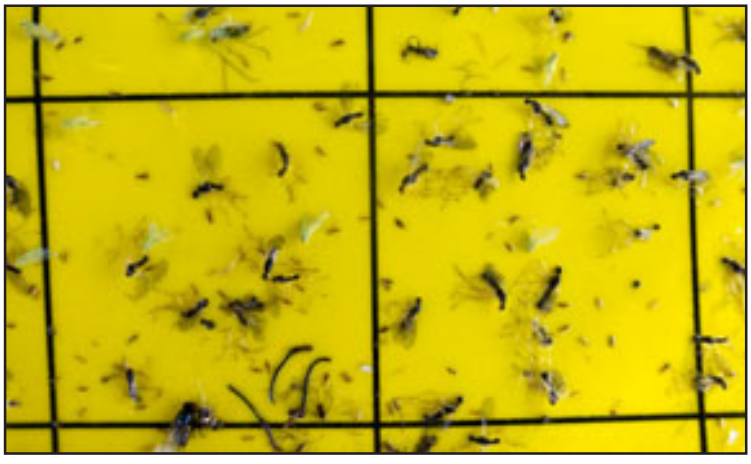
Yellow Sticky Trap - North side channel (72 hours on site)



Yellow Sticky Trap - North side channel. Small Diptera

END